MONTANA ENVIRONMENTAL POLICY ACT REVIEW OF OIL AND GAS DRILLING PERMITS

Prepared by:
Gail Kuntz, Resource Specialist
Environmental Quality Council Staff
July, 1986

TABLE OF CONTENTS

		Page #
I.	RECENT CASE STUDIES	
	A. The Exemption Issue	1
	B. Sohio-Bridger Canyon Application for a Permit to Drill	2
	C. The Coal Creek Lease and Drilling Plan PERs	5
II.	ENVIRONMENTAL POLICY ACT REVIEW OF DRILL PERMITS IN OTHER STATES	
	A. The New York Environmental Quality Review Act	6
	B. Michigan's Executive Order of the Governor	7
	C. The California Environmental Quality Act	8
III.	FEDERAL REVIEW OF DRILL PERMITS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT	8
IV.	ANALYSIS	
	A. The Programmatic Environmental Impact Statement	10
	B. Preliminary Environmental Reviews	11
	C. Expanded Preliminary Environmental Reviews	12
	D. Environmental Impact Statements	13
V.	INTEGRATING MEPA WITH REVIEW OF APPLICATIONS FOR PERMITS TO DRILL	14
VI.	CONTRIBUTIONS OF MEPA REVIEW	15
VII.	OPTIONS FOR EQC CONSIDERATION	16

ATTACHMENT A: New York Well Drilling Environmental Assessment Form and Sample Permit Conditions

ATTACHMENT B: Example of Gas Well Use Permit and Environmental Study, Sacremento County, CA

ATTACHMENT C: Federal Categorical Exclusion Form and Example

The Montana Environmental Policy Act (MEPA) embodies a state policy requiring the review of environmental impacts of state actions. A brief written statement called a preliminary environmental review (PER) is prepared to determine whether a proposed action of state government will significantly affect the quality of the human environment. If the PER indicates the proposed action would have a significant effect an Environmental Impact Statement (EIS) must be prepared.

Montana's Board of Oil and Gas Conservation (Board) has approved an average of 900-1000 drill permits annually in past years, but has not historically undertaken MEPA review of the permit applications, with one exception that is discussed in this report. The Board believes that its approval of applications for drill permits is not a state action that must be evaluated according to MEPA procedures because it considers the decision non-discretionary or ministerial. According to the MEPA rules, non-discretionary actions do not require an EIS.

Montana's oil and gas statute directs the Board to make rules to "prevent contamination of and damage to surounding land or underground strata caused by drilling operations and production, including but not limited to regulating the disposal of salt water and oil field wastes (emphasis added)." However, through its rules the Board has defined the drill application content and review process, including the time allowed for review, in a manner that makes permit issuance an essentially ministerial action. A major outstanding issue is whether the Board should excercise more discretion to direct oil and gas field operations than it currently assumes.

RECENT CASE STUDIES

The question of MEPA's applicability to issuance of oil and gas drill permits has been raised at least three times over the past few years. In 1981 the Legislative Auditor conducted a sunset review of the Board, and in finding that the Board had no rules to implement MEPA, stated that the issue of the Board's compliance with MEPA would likely arise in the future, particularly in conjunction with drilling in the Overthrust area, since that area is "more environmentally fragile". The Auditor's report concluded that, "(T)he Legislature should consider clarifying the applicability of MEPA to ...the Board ..." The three specific occasions concerning applicability of MEPA to oil and gas drilling are reviewed below.

A. The Exemption Issue

Senate Bill 410 was introduced during the 1985 legislative session to exempt the Board from MEPA, but the bill died in committee. A number of comments raised by the Board's attorney in response to the Legislative Auditor's report and in support of SB 410 are summarized below, along with relevant comments supplied by other persons during the hearing on SB 410.

According to the Board's attorney, there has been no indication in the 14 years since MEPA was passed that any of the more than 12,000 drill

permits issued by the Board during that time have adversely affected the environment in any significant manner. Also, "to require the Board to base its decisions on permitted well locations on factors other than the location most likely to result in commercial production of oil and gas would hopelessly conflict with (the Board's) statutory mandate to prevent waste and provide for efficient and economic development of oil and gas pools." The Board's attorney noted that the Montana Supreme Court held in Montana Wilderness Association v. Board of Health in 1976 that MEPA is procedural and grants no additional regulatory powers. For example, the Board believes it does not have the authority to regulate construction of access roads.

Several persons commented that the only result of requiring an EIS before the issuance of drilling permits might be to delay development on private lands. It was noted that the appropriate time to apply MEPA review to oil and gas development is when leases are issued on state land. Where the land and minerals are privately owned, the Board felt that MEPA was not intended to provide veto authority over a private landowner's decision to develop minerals.

The Board's attorney cited the following practical problems with MEPA compliance: 1) The Board does not have employees trained in identifying and evaluating "presently unquantified environmental amenities and values" as required by MEPA. 2) Previous testimony before the 1979 Legislature on a matter unrelated to the Board or to oil and gas regulation included an estimate that a core environmental staff of seven people costs approximately $135,000 per year. 3) Approximately $7500 and two months time would be required to prepare a PER for a proposed well for which the company had already completed the basic necessary research; the fees authorized by MEPA would not begin to cover these costs for the average well in Montana.

The Board's attorney submitted comments on both the Legislative Auditor's report and on SB 410 stating that if the Legislature decides that the Board should comply with MEPA and prepare EIS's, clear guidelines are needed to assist the Board in making the judgements called for by MEPA, and in determining when a Board decision might "significantly affect the quality of the human environment."

B. Sohio-Bridger Canyon Application for a Permit to Drill

In October 1984 Sohio Petroleum Company applied for and received a drill permit from the Board for an exploratory, "wildcat" oil or gas well in the Bridger Canyon area north of Bozeman. After a group of residents sued in December 1984 to require the Board to follow MEPA requirements in issuing the permit, Sohio withdrew its application. After SB 410 failed during the 1985 legislative session, Sohio renewed its application and requested the Board to review the permit as though MEPA applied and to prepare a PER. This was the first, and to date it remains the only PER the Board has written.

Residents of Bridger Canyon and other citizens of the Bozeman area expressed considerable opposition to the proposed Sohio well. Concerns

included health and safety effects, and the risk of a hydrogen sulfide (H_2S) blowout. There was also general opposition to the drilling and the possible eventual presence of one or more producing wells in a scenic, rural-residential area.

The public's concerns were registered in several forums, including 1) a public hearing held by the Board in April 1985 prior to the draft PER, 2) comments on the PER, and 3) a hearing before the Bridger Canyon Planning and Zoning Commission that covered a total of seven days in four separate sessions between June and September, 1985. The zoning commission was involved because Sohio and the surface owners of the proposed well site had to obtain conditional use permits in accordance with requirements of a Bridger Canyon zoning ordinance which designated the area an "agricultural-exclusive" district.

Experts in blow-out prevention, safety, and control of H_2S-producing wells were brought in by both the citizens and Sohio to testify at the hearings and otherwise furnish information. In addition, Sohio sponsored preparation of its own environmental impact report and developed a citizen evacuation plan for use in the event of an accidental release of H_2S. Other testimony and information submitted during the hearings concerned the effects of increased traffic in the Bridger Canyon area, access road construction, reserve pit construction, noise impacts, visual impacts, garbage and sewage disposal, and effects on water wells and air quality.

This public interest and opposition was unprecedented for proposed drilling of oil and gas wells on private land in Montana. Wells have been drilled and are currently producing in other areas of the state that are in agricultural use, are relatively close to residences, and contain H_2S gas (e.g., the Sidney area). Also, numerous wells have been drilled on private lands that are considered very scenic and high in natural environmental amenities. The Bridger Canyon well may be the first site that has exhibited all of these characteristics (or the potential, in the case of H_2S).

The Board's PER was prepared at Sohio's request. Subsequently the Board elected to take the unprecendented step of attaching a number of site-specific conditions to the drill permit. The Board stated that, "to the extent within our statutory authority, we should ...meet the concerns of the area residents." The conditions addressed volume of surface casing to be placed in the well, sewage disposal, volume of water use, reserve pit lining, removal of pit contents, a citizen evacuation plan and drilling safety. Also, commitments were made to conduct more frequent inspections than are normally done, and to prepare a detailed inspection checklist, with copies of the results of each inspection to be furnished to the "Gallatin County Zoning Board". The Board of Oil and Gas Conservation concluded that the issuance of the drill permit, as conditioned, was not a major action significantly affecting the quality of the human environment and therefore no EIS was required.

The Bridger Canyon Planning and Zoning Commission imposed 33 conditions on Sohio's use permit that addressed the following: evacuation training

for sheriff, fire and disaster/emergency service personnel and establishment of communication lines from the well site to these offices; installation of sirens at the site; payment of compensation for livestock killed or injured due to H_2S inhalation; paving and maintenance of the access road; repair of the county road (if necessary); control and scheduling of traffic; further approval of site reclamation plans; visual screening of potential future production facilities; inspections by county or zoning commission personnel; repair or replacement of water wells (if necessary); monitoring and control of noise; monitoring of air quality; payment for damages; and disposal of sewage and garbage. The zoning commission approved the conditional use permit in October 1985.

If the proposed well site had not been within a zoned agricultural district, it is unclear whether the issues included in the conditions approved by the zoning commission would have been addressed. If these issues had not been addressed, it is also unclear whether the citizens opposing the well would have pursued further legal action against the Board. The Board deferred to the zoning commission on several items such as noise and traffic control, final approval of the citizen evacuation plan, and standards for access road construction. As noted previously, the Board stated that its conditions would be limited by the extent of its statutory authority. Sohio agreed to all of the conditions set by both the Board and the zoning commission and incurred considerably more expense than is normally required for well drilling in Montana.

The review process led to approval of the Sohio drill permit in October of 1985, a year after the initial application was filed. Sohio began drilling in late January 1986, but in July announced that the well was a "dry hole" and would be abandoned.

The lack of a single, comprehensive environmental review document and a well-defined review process may have worked to the detriment of Sohio. The Board was criticized by many interested citizens for giving routine approval to the initial Sohio drilling permit application in the fall of 1984 without public review. Further criticism was directed at the Board's PER. Many interested citizens considered it inadequate because of the lack of detailed analysis of most topic areas listed in the MEPA rules, and because it ignored some topics altogether. The environmental impact report prepared by Sohio's consultant received public criticism because it was not an independent study. The Sohio review process was further complicated by the involvement of two decision-making bodies and two hearings held for different purposes from April-September 1985.

This case study raises at least two important points for consideration. First, environmental review of even very complicated drill projects in environmentally sensitive locations could be structured more efficiently, with reductions in the uncertainty and potentially the amount of time required to conduct the Sohio permit review. State agencies that routinely prepare PERs and EISs have learned to streamline the process without sacrificing the quality of environmental analysis. Second, the vast majority of drill permits would not require the level of review involved with the Sohio permit, assuming compliance with all

aspects of the Board's regulations, and imposition of conditions/mitigation measures to address site specific environmental concerns.

C. The Coal Creek Lease and Drilling Plan PERs

A PER has been prepared on only one other proposed oil/gas well on state or private land in Montana to date. The Department of State Lands (DSL) received an "operating plan" from CENEX in early May 1984 for drilling an oil/gas well on the Coal Creek State Forest west of Glacier National Park. The "operating plan" was required as a result of lease stipulations identified by a 1983 PER prepared by DSL that examined the environmental consequences of oil and gas leasing in the forest. The DSL decided to prepare a detailed, site-specific environmental review of the planned drilling, and issued the resulting PER for public review and comment in October 1984.

The PER on the Coal Creek well is another example of how environmental review of a controversial oil/gas drilling project can be handled. Coal Creek State Forest is located in the drainage of the North Fork of the Flathead River. The area has outstanding natural resource values, including a national scenic river, Glacier National Park, Glacier-Waterton Biosphere Reserve, and critical habitat for the grizzly bear and wolf. There is also a group of concerned citizens, the North Fork Coalition, monitoring all types of development in the drainage.

Based on the drill plan PER, the DSL identified a number of mitigation measures addressing water quality, accidents, man-bear incidents, bald eagle nesting, noise and visual impacts, and air quality. These measures, which were attached as conditions to the operating plan, played an important role in DSL's determination that environmental impacts would not be significant and that an EIS would not be necessary.

Public comments on the PER indicated some disagreement with this decision. In a supplement to the PER issued in January 1985, the DSL stated that an EIS would be written to examine the impacts and issues associated with oil and gas production on the Coal Creek Forest if a major hydrocarbon discovery resulted from the drilling. The DSL noted that it is highly unlikely that environmental review of a future production proposal would "identify a potential impact capable of entirely preventing development not identified at the previous exploration evaluation stage." The same discussion added, however, that "it is not possible to entirely rule out a denial for a production stage at the well site."

The sequential type of review DSL has used on the proposed Coal Creek drilling operation has been described as "tiering" or "staged review". It recognizes that adequate information to predict impacts of potential future actions such as drilling and production may not be known at the time that leasing evaluations and decisions are made. Also, drilling does not ultimately occur on a high percentage of leases, and production does not result from many exploratory drilling operations.

The "tiered" review was possible because the DSL has authority to review all activity on state lands, and aproval at one stage of operations is not a guarantee that subsequent approvals will be given. Federal agencies such as the Forest Service and Bureau of Land Management have followed a similar pattern in evaluating leasing and drilling decisions. It is important to note that issuance of permits by the Board of Oil and Gas Conservation has historically conveyed implicit approval to proceed with production. If commercial deposits of oil or gas are discovered, compliance with the Board's rules is required, but significant environmental review does not occur at the production stage.

Since issuance of the PER supplement, DSL has discovered that it does not have clear title to the land proposed for drilling. Old records potentially transferring the land to the U.S. Forest Service need to be clarified. Also, the North Fork Coalition filed suit to require DSL to prepare an EIS on the Coal Creek drilling project. For these reasons as well as the current depressed market conditions, no drilling has occurred on the Coal Creek State Forest to date.

II. ENVIRONMENTAL POLICY ACT REVIEW OF DRILL PERMITS IN OTHER STATES

There are approximately a dozen states that have environmental policy acts or other administrative processes similar to MEPA. Of these states three have significant oil and/or gas production. The following section is a brief summary of how the environmental review of oil and gas drilling is accomplished in New York, Michigan, and California.

A. The New York Environmental Quality Review Act

New York's Department of Environmental Conservation (DEC) is responsible for issuing oil and gas drill permits under the Oil, Gas, and Solution Mining Law and the State Environmental Quality Review Act. New York has between 4000 and 5000 active oil wells and about 4000 active gas wells. In comparison, Montana had 4716 active oil wells and 1958 gas wells in 1984. In 1984, 686 wells were drilled in New York, a volume of activity that is comparable to the 725 wells drilled in Montana in the same year. New York employs about fifteen field inspection staff as compared to seven in Montana. Pre-drill site inspections are conducted in New York before drill permits are issued. Permit processing takes about 10 business days if the application contains all necessary information, as compared to one-day service in Montana.

The DEC is currently completing a new generic EIS (GEIS) that will be used to establish the future basis for environmental review and permitting of oil and gas wells. A GEIS is equivalent to the programmatic EIS described in Montana's rules for implementing MEPA. Programmatic EIS's are used to evaluate a particular class of agency-initiated actions. The GEIS examines the various types of impacts that could occur from oil and gas drilling and production in different types of locations, and identifies mitigation measures that could be used to condition drill permits. Some of the conditions are being proposed for inclusion in New York's oil and gas regulations.

C. The California Environmental Quality Act

The state and county governments share responsibility for approving oil and gas drilling operations in California. The counties' approval concerns surface use and well location. They decide the level of environmental review that is required under the California Environmental Quality Act (CEQA) and prepare the necessary evaluations. Based on the environmental review, conditions may be attached to surface use permits in order to reduce adverse impacts. The state oil and gas agency subsequently issues the actual drilling permit, and regulates the drilling and casing program.

Only a few California counties prepare environmental analyses as part of the review process. Most drill applications are approved under CEQA as "negative declarations". This means that an evaluation of the information submitted by the applicant company, and as conditioned by the county, shows that no signficant adverse environmental impacts would occur, and no EIS will be prepared.

In Sacramento County, negative declarations typically take 30 days to prepare, with another 10 days added for public review. All oil and gas wells in that county receive at least this level of review. Attachment B is an example of a conditioned use permit for a gas well, and the initial environmental study and checklist used to make the determination that the well would not have significant impacts. A review of two negative declarations from Sacramento County indicates that the initial studies and conditions are nearly identical for these wells except for a few site-specific conditions concerning proximity to residences and floodplains. Apparently the environmental analysis has been standardized, and adjusted to incorporate site-specific considerations for each proposed well.

III. FEDERAL REVIEW OF DRILL PERMITS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT

Oil and gas drilling is a category of activity that is normally "categorically excluded" from detailed environmental review under the National Environmental Policy Act (NEPA). A "categorical exclusion" does not mean that drilling is exempt from NEPA. Rather, it involves an evaluation that is roughly equivalent to the checklist type of PER many Montana state agencies currently use to determine whether significant impacts are likely to occur as the result of a proposed action. Attachment C contains a completed categorical exclusion form with attached stipulations from the Wyoming Bureau of Land Management.

Most drill permits qualify as categorical exclusions for at least three reasons. First, federal agencies have developed specific requirements for reserve pit design and other types of surface disturbance associated with oil and gas drilling that reduce most common types of environmental impacts. Second, forest or resource management plans contain information and standard restrictions for various types of uses on public lands that further limit potential impacts. Third, for some areas, oil and gas leasing programmatic EISs have already assessed many

of the impacts of oil and gas exploration and development and identified mitigation measures for thess activities. Available background data and the location proposed for drilling are examined to determine whether a proposed drill operation is likely to cause significant adverse environmental impacts. Proposed drilling would not qualify for a categorical exclusion if it could cause any of the following conditions:

> 1) cause significant adverse effects on public health or safety; 2) cause adverse effects on unique geographic characteristics such as historic or cultural resources, park, recreation or refuge lands, wilderness areas, wild or scenic rivers, sole or principal drinking water aquifers, prime farm lands, wetlands, flood plains, or ecologically significant or critical areas, including those listed on the National Register of Natural Landmarks; 3) cause highly controversial environmental effects; 4) cause highly uncertain and potentially significant environmental effects or unique or unknown environmental risks; 5) establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects; 6) cause adverse effects on properties listed or eligible for listing on the National Register of Historic Places; 7) cause adverse effects on species listed or proposed to be listed on the list of endangered or threatened species, or have adverse effects on designated critical habitat for these species; 8) require compliance with floodplain management, wetland protection, or fish and wildlife coordination acts/executive orders; 9) threaten to violate a federal, state, local or tribal law or requirements imposed for the protection of the environment.

Mitigation measures submitted by the applicant, another agency or the BLM as part of the original project proposal are acceptable for reducing impacts below the "significance" threshold. Standard stipulations may also be attached to the drill permit to accomplish the mitigation. If these stipulations/mitigation measures are not adequate to reduce impacts in the above-listed categories to the point that they are no longer considered "significant", the project will not qualify for a categorical exclusion. In that event, an environmental assessment (EA) must be prepared. EA's contain information addressing the same categories listed above, but in more detail than a categorical exclusion and with more emphasis on defining site-specific mitigation measures to reduce impacts.

EA's are usually prepared if the proposed drilling would occur in a "new" area that is not near an established oil/gas field or if one or more of the significant adverse effects listed above would be likely. EA's are more equivalent to the "expanded PER's" some Montana state agencies prepare. EA's must contain sufficient analyses to allow readers to reach a conclusion about the significance of impacts, and include descriptions of the proposed action and alternatives, discussion of any irreversible impacts or commitment of resources, (direct, indirect and cumulative impacts), proposed mitigation and a description of public involvement efforts. The seriousness of resource conflicts, degree of public interest or controversy, and risk to resources dictates the complexity and level of detail in an EA. Federal agencies are given

considerable discretion as to size and complexity of these documents and are allowed to tailor them to case by case circumstances. Again, this is very similar to Montana's PER process.

If significant impacts remain after an EA is completed and mitigation identified, an EIS must be prepared to accomplish the more detailed level of review required to address those impacts.

The Board of Oil and Gas Conservation and the Montana BLM have a cooperative agreement to provide consistent statewide oil and gas orders, policies and procedures affecting federal and non-federal lands, to avoid duplication of effort and define jurisdictional authority on Indian lands. The Board approves all matters where non-federal minerals are involved, including cases where federal and/or Indian minerals are partly involved. If federal or Indian lands are involved the BLM may require that the Board refer the case to the BLM for decision.

The cooperative agreement generally appears to work well. However, the sequence of the approvals needed from federal agencies and the Board varies and may not always occur in the most appropriate order. For example, during the spring of 1986 the BLM was preparing an EA on an application submitted by Amoco to directionally drill onto a federal lease onto the Custer National Forest. The proposed drill site is located on private land south of Red Lodge. The Board approved the drilling permit while the EA was being prepared. The BLM indicated that the Board's decision did not create a problem in this case, but that difficulties could arise in cases where the BLM's review indicates that a drill permit should be denied.

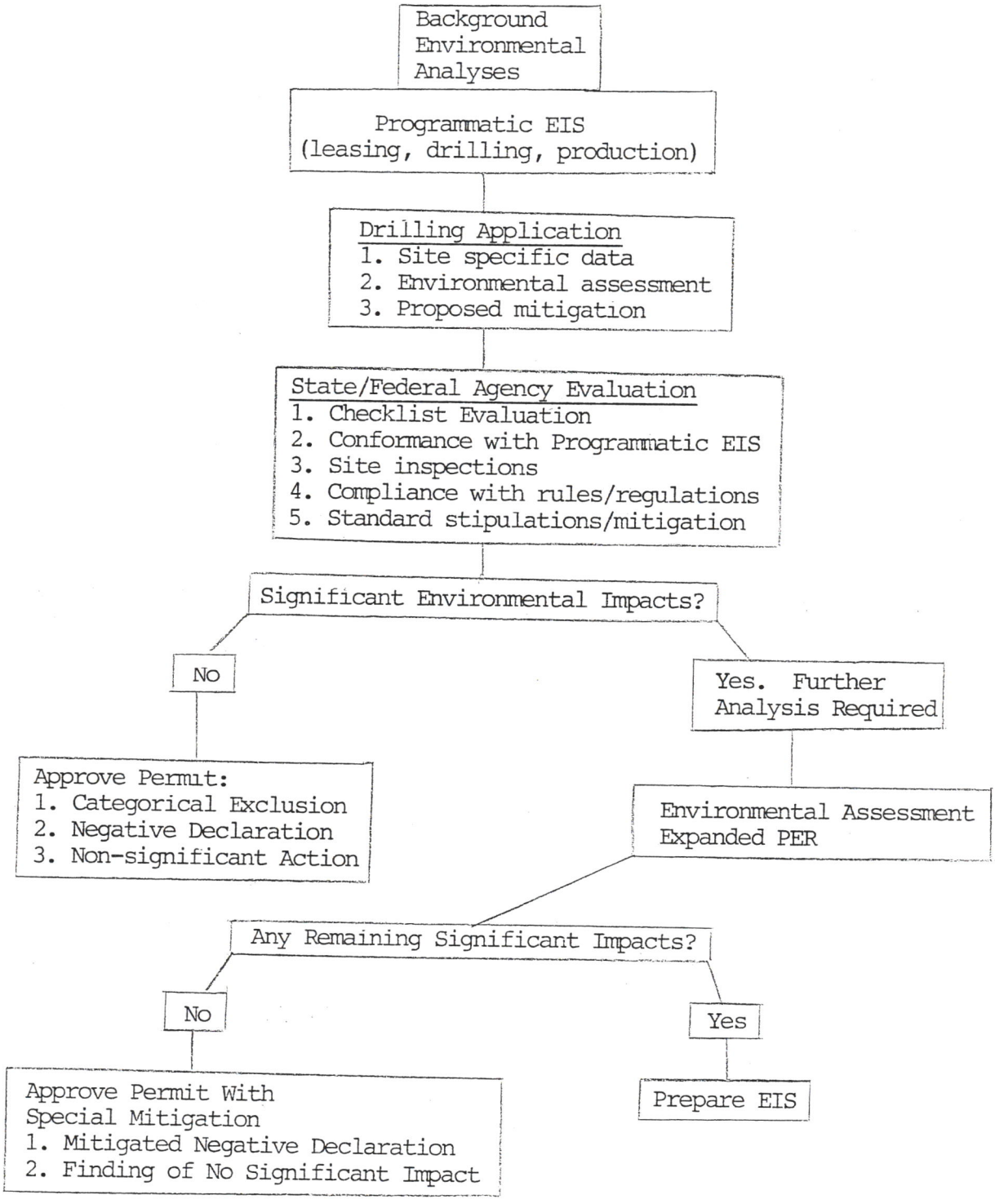
ANALYSIS

New York, Michigan, California and federal agencies apply the concept of tiered environmental review in approving drilling permits. This section summarizes the various steps in the environmental review process as shown in the accompanying diagram and explores the possibility of developing a method for satisfying MEPA that would not create delay in approving most drill operations.

A. The Programmatic Environmental Impact Statement

The first step in applying MEPA to the review of drilling permits could involve a programmatic EIS. The New York process utilizes this model for establishing that oil/gas drilling operations exhibiting certain characteristics and conditioned with "standard" environmental stipulations are exempt from further environmental review. Programmatic environmental analyses are prepared to clearly identify the range of impacts that may occur from oil and gas exploration and development and to identify potential mitigation measures. "Standard environmental stipulations or mitigation measures" refer to specifications applied to drill site construction activities that would reduce environmental impacts. Some examples include removing and stockpiling top-soil, standards for new road construction that minimize the potential for

MODEL ENVIRONMENTAL REVIEW OF OIL/GAS DRILLING



erosion, standards for crossing streams, general avoidance of surface water bodies, and site reclamation procedures. If a proposed drilling plan appropriately addresses these types of considerations, no stipulations may need to be attached to the drill permit.

A programmatic EIS could take a regional approach and examine the environmental implications of drilling in geographic areas with similar characteristics. For example, the generic impacts of drilling and production along the Rocky Mountain Front and in the area west of the Continental Divide could be analyzed as one unit, and impacts on the eastern half of Montana analyzed as another unit. If the Board were to prepare a programmatic EIS, it may not be essential that a team of environmental specialists join the Division of Oil and Gas Conservation staff. Preparation of this type of document could be accomplished by a one-time contract with a private sector consultant or another state agency. Also, considerable material could likely be borrowed from the oil and gas leasing and production EIS's previously prepared by federal agencies, the DSL and the Department of Fish, Wildlife and Parks (DFWP) for the lands they manage.

The discussion of the DSL's Coal Creek PER focuses on the different levels of impacts associated with exploratory drilling versus production. If MEPA review were to be applied to issuance of drill permits that review would likely have to encompass review and mitigation of production impacts. A programmatic EIS could address both drilling and production, and identify appropriate stipulations for both levels of development that could be attached to the drill permit. For drilling that occurs near established producing fields, standard regulatory requirements and stipulations would almost certainly be adequate. For wildcat wells, more "customized" stipulations might be necessary, and more detailed initial environmental review to identify appropriate requirements. The DSL's environmental review of drilling on the Coal Creek State Forest provides a model for the tiered approach to decision-making. The Board could consider this approach in special cases and stipulate the need for further environmental review of production activities when it approves the drill permit. However, further legal review and revisions to the oil and gas statute could be necessary to make this a viable approach.

B. Preliminary Environmental Reviews

The environmental evaluation of drilling applications may be based on information submitted by the applicant, site inspections, and applicable information contained in a programmatic EIS, and includes attaching conditions to permits to reduce environmental impacts. Such evaluations have not been done in the past in Montana. There is no organized record or body of data to prove or disprove the extent of impacts that have occurred as a result of oil and gas operations. Incidents of localized, site-specific impacts have occurred, including salt water brine contamination of soil and water wells, leaking reserve pits, leaking wells, improper placement or construction of roads, and various other surface disturbances that have resulted in problems for landowners over the years.

The oil and gas statutes were amended in 1981 to 1) ensure that landowners are informed prior to proposed drill operations so they can evaluate the potential effects on their continued use of the property, and 2) to provide for landowner collection of payments for surface damages or disruption. Landowners from major oil and gas producing areas in the state testified in support of this legislation because of past problems they had experienced with a few companies that failed to conduct their operations in an acceptable manner.

The information resulting from site-specific MEPA review would almost certainly better inform landowners about the effects of drilling and would facilitate placement of appropriate stipulations in lease agreements. If environmental stipulations and conditions were developed, based on site-specific information, this would further reduce the potential for unacceptable impacts to occur.

As noted in the diagram, PER review would be based on information about the drill site submitted by applicant companies (e.g., soils data, water quality and quantity data) and would potentially include proposed mitigation. If a checklist PER shows that potential environmental impacts are not significant, the permit would be issued. State and federal agencies have applied various names to this environmental review finding, including categorical exclusion, negative declaration, and non-significant action.

If the Board were to conduct MEPA review of drilling applications, the existing staff might require some additional training in evaluating environmental data. Training might also be needed to conduct PER checklist reviews, but given the current reduced rate of drilling activity (about 1/3 the level of the past few years), additional staff might not be needed in the short term to handle the workload.

EQC staff conducted an informal survey during the spring of 1986 to assess the costs and time state agencies are typically incurring to complete checklist-type PER's. Three agencies reported taking one or two days time for an approximate cost of $250 per project. Another agency estimated one to five days and a commensurate increase in costs.

Although Montana's Board of Oil and Gas Conservation is technically responsible for approving drill permits, the Oil and Gas Conservation Divison staff has been delegated the duty of processing and approving the applications. Approvals are usually given the same day the applications are received. The speed of permit issuance is mandated by the Board's rules rather than by the statute, and is apparently done to accommodate the industry. With appropriate background data such as could be developed through a programmatic EIS and adequate site-specific data in applications, no significant delay need be incurred in conducting an environmental review of most drill permit applications.

C. Expanded Preliminary Environmental Review's

The stipulations and mitigation measures identified in a programmatic EIS might not cover all potentially significant adverse environmental

impacts associated with some drilling proposals (most likely due to the environmental sensitivity of the proposed location and public concerns such as those raised in conjunction with the Sohio well). The federal agency criteria for determining the need for an environmental assessment thoroughly address the rationale for deciding that more detailed review is needed than would be included in a checklist (or categorical exclusion) (see page 9).

If significant impacts are likely to occur, and are not adequately reduced based on the applicant's proposed mitigation or mitigation proposed by the agency, more detailed analyses are necessary to "custom-design" appropriate mitigation. This review process may take several weeks to several months, and also may involve coordination with other agencies and public review. This level of analysis or decision goes by several names (e.g., mitigated negative declaration, environmental assessment, expanded PER).

The Board could accomplish the more detailed site-specitic environmental analysis via contracts. However, the prohibition on assessing fees for PER-level reviews would be a problem, and it would likely prove difficult to fund these efforts. Alternatively, the Board could request funding for an environmental specialist to handle these reviews in conjunction with the oil and gas field inspectors. One option for obtaining the funding for such a position would be to slightly increase drill permit fees.

Expanded PER's such as the one prepared by DSL for the Coca Mine or by DNRC on water rights and water development projects, may cost from $10,000-$15,000. These type of evaluations typically involve field investigations, data collection, detailed analyses, and development of "custom-designed" mitigation measures, as well as public involvement. As noted previously, the Coal Creek expanded PER required approximately seven months to complete. Although very few drilling proposals are likely to involve this level of review, they are a strain on agency budgets and staff resources.

Environmental Impact Statements

The potential for an EIS to be required to appropriately review an oil or gas drilling application is very low, but the need for this detailed level of environmental review could occur. For example, a question that is difficult to answer is whether potential oil and gas development, especially from wildcat wells, may constitute a significant environmental impact by virtue of its location and regional context. This question underlines much of the uncertainty and litigation that has affected oil and gas activities in roadless areas on public land. Federal agencies take the lead in conducting environmental reviews on public land under NEPA. If similar issues were to arise in conjunction with oil and gas development on private lands with non-federal minerals, the Board would be the agency faced with deciding the most appropriate level of environmental review.

An EIS could contain a detailed analysis of other current levels of activity in an area proposed for drilling in order to establish a context for evaluating the significance of impacts associated with the issuance of the drilling permit and potential production. Also, the values and productivity of the existing environment might be discussed in relation to the potential impacts on those values resulting from a major oil or gas development. As part of this discussion, a cumulative effects analysis could also be presented, based on one or more possible scenarios of oil and gas development. The BLM is currently preparing this type of analysis for an EIS on potential future production levels in the Blackleaf Canyon area along the Rocky Mountain Front.

Discussion of alternatives to the proposed action is a critical element of MEPA review that usually is examined in detail in an EIS but not in a PER. An analysis of alternatives could shed additional light on the various options available to the Board. Analysis of the no-drilling option could clarify the legal constraints on the Board and the potential costs and benefits to the state. Also, a discussion of alternatives might lead to more detailed consideration of inter-agency coordination for long term management of some environmentally sensitive areas. The level of analysis in an EIS is particularly useful for explaining an agency's decision to the public and insuring that the full range of issues and concerns associated with a proposed action are considered.

Agencies can collect fees for EIS's. Recent estimates indicate that wells drilled in the Overthrust Belt may cost from $6-$8 million each. The fee schedule in MEPA would provide a maximum of $70,000-$90,000 to conduct the environmental review for this type of well.

V. INTEGRATING MEPA WITH REVIEW OF DRILLING APPLICATIONS FOR PERMITS TO DRILL

As discussed in the companion EQC staff report concerning environmental-related oil and gas regulation in the Rocky Mountain states and Alberta, Montana's neighboring states (Wyoming, North Dakota, and Utah) routinely condition drill permits and/or provide site-specific directives to oil/gas operators concerning construction of waste disposal pits and surface use activities that could adversely affect water quality and other environmental values. The conditions to permits or other types of directives to oil and gas companies are based on requirements in the regulations, examination of site-specific data provided by applicant companies and/or pre-drill site inspections.

The Montana Board of Oil and Gas Conservation has several rules for construction of drilling mud and salt water disposal pits, but site-specific data is not required with drill permit applications and the guidance contained in the rules is general. Field inspectors often do not visit drill sites before operations begin. If a company is found in violation, disposal pits can be condemned or bonds can be held until sites are properly reclaimed. Some general conditions are attached to all drill permits, including the requirement that a sump adequate to contain all mud and water bailed from the hole must be constructed, and

sufficient cement placed in the hole to protect the casing and all possible productive and fresh water bearing formations. However, Sohio's Bridger Canyon drilling operation remains an exception because of the site specific environmental analysis and conditions that were attached to the permit. Surface use requirements are primarily specified by landowners, although the Board's rules require that sites must be restored to previous grade and productive capability.

The Board has been concerned that if it were required to base its permit decisions on factors other than the location most likely to result in commercial production, there would be conflicts with its mandate to prevent waste and provide for efficient development. MEPA review would not, in the large majority of cases, involve re-locating drilling operations. As indicated by the discussion of other state and federal processes, the most common result of environmental review is the imposition of mitigation measures concerning how the drill operation takes place.

Based on statutory language concerning the Board's authority to make rules to prevent contamination and damage to surrounding land and underground strata, the Board may, in fact, have authority to limit adverse environmental impacts of access roads and any other aspect of well drilling and production. Proper placement of roads and restrictions on use and method of construction, in consultation with the landowner's wishes, may in some locations be the most effective way to control erosion and protect environmental values such as water quality. MEPA review is instrumental in ensuring availability of sufficient information to make this type of determination, and it also serves to document potential environmental impacts and provide information to the public.

Nothing in the Board's statutory authority conveys explicit authority to deny drilling permits, except where a proposed location would violate field spacing requirements or other aspects of efficient/economic production. Hence, incorporating MEPA review into the Board's permitting process would not in itself clearly lead to denying or vetoing drilling.

VI. CONTRIBUTIONS OF MEPA REVIEW

MEPA review of oil and gas drilling projects would provide several positive contributions to the regulatory process in Montana, considering the perspectives of landowners, the oil industry and the public. Industry and regulatory agencies have stressed the importance of clear regulatory requirements both for allowing development to proceed in a timely and appropriate manner, and for minimizing the potential for conflicts and litigation. Based on MEPA review, the potential adverse environmental impacts and mitigation measures would be identified before project activities begin. A programmatic EIS would provide the added benefit of allowing a significant portion of the environmental analysis to occur prior to the review of individual oil and gas projects, and establishing up-front requirements and guidelines for industry to follow in designing drilling and production operations.

MEPA review could minimize conflicts between regulatory agencies, industry, environmental groups, landowners and other concerned citizens by providing a formal, constructive context for: 1) information dissemination; 2) public review and input; 3) industry and agency response; and 4) interagency coordination and communication.

Finally, it might be argued that regulatory requirements should be applied equitably to all types of projects and development activities that could have a significant effect on the human environment. Most other industries in Montana have successfully integrated environmental review requirements into their project planning activities. Also, in other states with environmental policy acts, the oil and gas industry has adapted to environmental review and mitigation requirements.

VII. OPTIONS FOR EQC CONSIDERATION

The following options present a range of alternatives that recognize the legal uncertainties concerning MEPA review of oil and gas drilling applications.

1. Preserve current drilling permit review procedures and wait for clarification from the courts concerning the applicability of MEPA.

2. Direct the EQC staff to prepare new proposed legislation to formally exempt the Board from MEPA.

3. The attorney general could be requested to review the oil and gas statute to determine the current extent of the Board's authority to condition drilling permits to reduce environmental impacts.

4. Request the Board of Oil and Gas Conservation to prepare a proposal to the next Legislature, including cost estimates, a time schedule and a management plan for conducting a programmatic environmental review of oil and gas exploratory drilling and production. The programmatic EIS would assess the impacts of oil and gas exploration and development in various regions of the state and identify appropriate environmental stipulations and mitigation measures.

   a. If this option is pursued, the Board could develop a proposal for funding from the Resource Indemnity Trust. The programmatic EIS would be of use in preventing future adverse impacts to water quality and other environmental values.

5. Staff from EQC, the Division of Oil and Gas Conservation and other interested/affected agencies could be directed to form a task force to devise a process for accomplishing MEPA review of drill permits and report back to the EQC.

   a. The task force could convene during the fall of 1986, and make at least an interim report to the EQC by December 1986.

b. The task force could include personnel from the Water Quality Bureau because that agency's overall responsibility for protecting the quality of state waters is affected by oil and gas operations. Also, personnel from DSL and FWP could be asked to share their past experience in preparing oil and gas leasing EISs and PERs.

c. The task force could assist the Board in developing a process for MEPA review of oil and gas drill applications in two phases. Phase I could occur during the fall of 1986 and could include: i) development of a plan for preparing a programmatic EIS (see Option 4); ii) development of a drill application form that would include site specific information necessary to conduct a checklist-type PER review; and iii) review of the Board's rules and regulatory practices to identify modifications or additions that would assist in integrating MEPA.

6. The Board could be requested to more closely integrate its regulatory system with federal environmental review processes that occur under NEPA, especially the timing of approval of drill permits.

Attachment A

OIL, GAS AND SOLUTION MINING WELL DRILLING ENVIRONMENTAL ASSESSMENT FORM

Purpose: The EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action is likely to have a significant effect on the environment as required by Article 8 of the Environmental Conservation Law. The question of whether or not an action is significant is not always easy to answer. Therefore this form has been designed to gather comprehensive information regarding environmental impacts of drilling oil, gas and solution mining wells while being flexible enough to allow site specific characteristics of individual operations to be included. There are no "right" or "wrong" answers; rather the information may be evaluated in total to determine environmental significance.

Process: This form is to be completed and submitted with each well drilling permit application. Your answers to the attached questions will be evaluated by the agencies having jurisdiction over the proposed well site. If an environmental impact is found to be both large and its consequence is important, a draft environmental impact statement may be required.

* * * * * *

INSTRUCTIONS

- This form is designed for DRILLING PERMITS. If your application is not for a drilling permit, ask for a standard Environmental Assessment form.
- ANSWER EVERY QUESTION. INCOMPLETE ASSESSMENT FORMS WILL BE RETURNED. If you are unable to answer some questions, contact the Mineral Resource Personnel in your region for guidance.
- Attach a sketch or additional pages if you feel it will clarify your answers.
- If you believe your drilling plan(s) prevent a potentially large impact, describe your prevention on an attached sheet.

November 1985 - Division of Mineral Resources
Effective April 1, 1986

WELL NAME AND NUMBER: _____

NAME AND ADDRESS OF APPLICANT:

Name: _____

Street: _____

P.O.: _____ State: _____ Zip: _____

Business Phone: (___) _____

DESCRIPTION OF PROJECT: (Briefly describe type of project or action)

_____

_____

PROJECT LOCATION: (or attach plat of wellsite) _____

_____

PROJECT SITE IS THE WELL SITE AND SURROUNDING AREA WHICH WILL BE DISTURBED DURING CONSTRUCTION OF SITE, ACCESS ROAD, PIT AND ACTIVITIES DURING DRILLING AND COMPLETION AT WELLHEAD.

(PLEASE COMPLETE EACH QUESTION - Indicate N.A. if not applicable)

A. SITE DESCRIPTION

(Physical setting of developed project site, including site of well, pits, access road and staging area.)

Land Use of Project Site

1. Total area of project site: _____ sq. ft. Approximate square footage of the items below:

	Presently (Sq. ft.)	During Construction (Sq. ft.)	After Completion (Sq. ft.)
Agricultural (cropland, hayland, pasture, vineyard, etc.)	_____	_____	_____
Meadow or Brushland (non agricultural)	_____	_____	_____
Forested	_____	_____	_____
Wetland (as per Article 24 ECL)	_____	_____	_____
Non vegetated (rock, soil, fill)	_____	_____	_____

2. General character of land: Generally uniform slope _____, Generally uneven and rolling _____, Generally even and flat _____.
3. Present land use: Rural _____, Forest _____, Agricultural _____, Suburban _____, Industrial _____, Commercial _____, Urban _____, Other _____.
4. What is the dominant land use and zoning classification within a 1/4 mile radius of the project (e.g., single family residential, R-2) and the scale of development (e.g., 2-story)? _____

_____

5. Is the site presently used by the community or neighborhood as an open space or recreation area? _____Yes _____No
6. Is any portion of the well site within an agricultural district approved purusant to Article 25AA of the Agriculture and Markets Law? _____Yes _____No If yes, which one? _____
7. Is any portion of the site within a land parcel having a soil and water conservation plan pursuant to NYS Soil and Water Conservation Law, Subdivision 7-a; Section 9? _____Yes _____No

8. Is the well site located within a coastal zone management area?
_____Yes _____No

Physical Characteristics of Project Site

9. What is the predominant soil type(s) at the site? _____
_____

10. What is the estimated depth to bedrock? _____ft.
11. What is the estimated depth to the water table? _____ft.
12. Is the well site located within or adjacent to a public water supply (e.g., aquifer, reservoir)? _____Yes _____No
If yes, what is the name of the supply?_____
Distance from project site_____ft.
13. Is the project site over a primary or principal aquifer? (These are potential high-yield aquifers that are currently being used or have the potential to be used for drinking water).
_____Yes _____No
14. Are there lakes or ponds within or nearby the project site? _____Yes _____No If yes, name _____, size_____acres.
Distance from project site to lake/pond. _____ft.
15. Are there streams within or nearby the project site? _____Yes ____No
If yes, name of stream and river to which it is a tributary. _____
_____
Distance from project site to stream. _____ft.
16. Is any portion of the property located in the 100 year flood plain?
_____Yes _____No.
17. Is there a wetland located at or adjacent to the well site? ____Yes _____No
18. Does the project site contain any species of plant or animal life that are as threatened or endangered? _____Yes _____No.
If yes, identify the species and source of information._____
_____
19. Are there any known archaeological and/or historical resources which will be affected by drilling operations? _____Yes _____No
20. Have you consulted with the NYS Office of Parks, Recreation, and Historic Preservation or other authority regarding the archaeological or historical resources at the site?_____Yes
_____No If yes, who was consulted? _____

B. PROJECT DESCRIPTION
(Physical setting of developed project site, including site of well, pits, access road and staging area.)

1. What are the physical dimensions and size of the project site?

	Presently	During Construction	After Completion
a) Access Road: (length & width)	_____	_____	_____
b) Well Site: (length & width)	_____	_____	_____
c) Total Area: (Sq. ft.)	_____	_____	_____

Access Road

2. Is it possible to utilize existing or common corridors when building the access road? _____Yes _____No Locate access road on attached plat.
3. Will material be brought in to build the access road and/or well site? _____Yes _____No If yes, describe the type of material.
_____

4. Will any measures be used to control access to the site? (e.g., gates, fencing, etc.) _____Yes _____No If yes, describe. _____

_____

_____

5. What will be the anticipated average number of vehicle trips onto public roads per day? During drilling_____After completion_____

6. Will access roads be treated to control dust? _____Yes _____No If yes, what will be used? _____

_____

Erosion Control

7. Are erosion control measures needed during construction of the access road and well site? _____Yes _____No If yes, describe.

_____

_____

8. How will surface run-off be minimized? _____

_____

Drilling

9. What will the operating hours of the rig be?_____ Anticipated length of drilling operations._____ days.

10. How distant will the nearest noise receptor be from the well and production facilities (house, office, etc.)?_____ ft.

11. From where will the water used on-site be supplied?_____

_____

12. If there is a discharge of fresh water during drilling operations, is there the potential that it may interfere with the flow of nearby streams? _____Yes _____No Cause erosion? _____Yes _____No Raise the water level in nearby ponds or lakes? _____Yes _____No

13. What possible fluids will be produced during drilling operations (e.g., oil, gas, fresh water, brine, etc.)?_____

_____

14. How will the drilling fluids and stimulation fluids be contained and disposed of?_____

_____

_____

15. Will waste of any type be disposed of at the site? _____Yes _____No If yes, describe. _____

16. Will fuel and/or other lubricants be stored on-site?_____Yes ____No If yes, what addition measures will be taken to contain to contain accidental spills or leakage during the drilling phase? ____

_____

_____

17. Will any open burning take place during drilling operations? _____Yes _____No If yes, what type of materials will be burned?

_____

_____

Production and Site Restoration

18. Will the topsoil which is disturbed be stockpiled for reclamation use? _____Yes _____No

19. What will be the approximate duration of soil disturbance on this well site, staging area, and access road? _____ days.

20. Does the reclamation plan include restoration of land management systems for soil and water conservation or require permanent drainage features (e.g., diversion terraces, subsurface drain lines, culverts, outlet ditches, etc.)? _____Yes _____No
Describe: _____

21. Does the reclamation plan include revegetation after the drilling is completed? _____Yes _____No If yes, what plant materials will be used? _____
Approximately how soon after drilling will seeding/mulching take place? _____ days.

22. Will the pit liner be removed after drilling operations?
_____Yes _____No

23. Please outline your planned production facility including permanent structures for this well. (Include wellhead equipment, pump jacks, and production waste containment) _____

24. Will production brine be stored on site? _____Yes _____No If yes, how will it be stored? (i.e., underground tank, above ground tank).

25. What method of disposal will be used for production brine/wastes?

Other Permits Needed

26. Are any additional permits required for this project? (local, state, federal). Please list each additional permit separately.

Permit	Approval Required	Submittal Date	Approval Date

Preparer's Signature: _____
Name/Title (Please Print): _____
Representing: _____
Date: _____

SUGGESTED SOURCES OF INFORMATION FOR OIL, GAS AND SOLUTION MINING ENVIRONMENTAL ASSESSMENT FORM

A.4 Dominant Land Use and Zoning Classifications
Sources: Local planning office
Town Supervisor's Office
Town Clerk's Office

A.6 Agricultural District Information
Sources: Cooperative Extension
DEC - Division of Lands and Forests
NYS Dept. of Agriculture and Markets
DEC Regional Division of Regulatory Affairs
DEC Regional Division of Mineral Resources

A.7 Soil and Water Conservation Plan
Sources: County Soil and Water Conservation District Office

A.8 Coastal Zone Management Areas
Sources: Local unit of Government
NYS Dept. of State, Coastal Management Program
DEC - Division of Water (maps)
DEC Regional Division of Regulatory Affairs (maps)

A.9 Dominant Soil Type
Sources: NYS Dept. of Agriculture and Markets
Soil Conservation Service
Cooperative Extension
Soil Survey Map U.S.D.A.
Region 9 contact: Paul Puglia
Agricultural Central
Rural Route No. 2
Turner Road
Jamestown, NY 14701
(716) 664-2351
DEC Regional Division of Regulatory Affairs

A.10 Estimated Depth to Bedrock
Sources: H_2O Well Drillers
Landowners
Previously drilled wells - in DEC Division of Mineral Resources files
DEC Division of Mineral Resources offices have maps with overburden information which might be used for estimating depth to bedrock.
County bedrock maps being prepared by the New York State Geological Survey

A.11 Estimated Depth to Water Table
Sources: H_2O Well Drillers
Landowners
Previously drilled wells in DEC Division of Mineral Resources files.

A.12 Public Water Supply

Sources: Local unit of government
NYS Dept. of Health
NYS Atlas of Community Water Systems Sources, 1982, NYS Department of Health.
Atlas of Eleven Selected Aquifers in New York State, United States Geological Survey, 1982.

A.13 Primary or Principal Aquifer

Sources: Local unit of government
NYS Dept. of Health
NYS DEC Division of Water - Regional Office
Availability of Water from Aquifers in New York State - U.S.G.S. Department of the Interior
Availability of Water from Unconsolidated Deposits in Upstate New York - U.S.G.S. Department of the Interior.

A.16 100 Year Flood Plain

Sources: DEC Division of Water
DEC Regional Divisions of Regulatory Affairs
DEC Region 9 Division of Mineral Resources flood plain maps by municipality.

A.17 Wetlands

Sources: DEC Regional Division of Fish and Wildlife
DEC Region 9 Division of Mineral Resources has wetland maps for each county in Region 9.

A.18 Threatened or Endangered Species

Sources: DEC Significant Habitat Unit - Delmar
DEC Regional Division of Regulatory Affairs

A.19 Archaeological or Historic Resources

Sources: NYS Office of Parks, Recreation and Historic Preservation circles and squares map
DEC Division of Construction Management - Cultural Resources Section
DEC Regional Division of Regulatory Affairs

B.26 Additional Permits Needed

Sources: DEC Regional Division of Regulatory Affairs
DEC Regional Division of Mineral Resources
NYS Office of Business Permits

New York State Department of Environmental Conservation

Henry G. Williams
Commissioner

Region 9 Division of Mineral Resources (716)372-5636
128 South Street, Olean, New York 14760

Supplementary Conditions

for

Permit No._____ Bass Island Drilling
(Rev. 7, 5/17/83

1. All pits shall be completely lined and sized so as to fully contain all drilling fluids plus any fluids resulting from natural precipitation. Additionally, a properly sized, completely lined reserve pit shall be constructed and ready for use prior tp penetrating the Onondaga and associated fault formations.

2. All fluids shall be maintained on site and properly disposed of as soon as possible after the drilling operations have been completed. Disposal to be undertaken only by a hauler with an approved Part 364 Permit.

3. A minimum of 450' or 100' into bedrock, whichever is GREATER, of surface casing shall be set and cemented to the surface by circulating cement with cement returns. An appropriate number of centralizers and baskets will be used and the pipe will have a minimum bursting pressure of 1800 psi. This office shall be notified four hours prior to cementing operations, so that a State Inspector may be present before and during the cementing operations. In the event a State Inspector is not present, a copy of the cement ticket will be attached to the Completion Report.

4. To insure adequate cementing results, lost circulation materials shall be added to the cement used in cementing the conductor and surface casing strings. In the event cement circulation is not achieved, cement shall be grouted down from the surface to insure a complete cement bond. If cement grouting is inadequate, the State may require a cement bond log and additional remedial measures to insure adequacy.

5. At least 300 barrels of kill fluid shall be on site ready for use if required by well conditions. Additionally, appropriate amounts of bentonite, weight material and lost circulation material will be on site to aid in well control.

6. Redundant mud pumping capability shall be provided onsite, and connected, either with a secondary mud pump or a stand-by service company pump truck.

7. Blowout prevention equipment, either pipe and blind rams or a spherical annular type, shall be installed on the wellhead, and all control lines shall be high pressure tubular steel with flanged connections. The BOP is to be actuated by an energy source other than rig hydraulics. A new air head rubber shall be installed in the rotating head prior to penetrating the Onondaga and associated fault formations.

Home Telephones for State Inspectors:	C. B. McGranahan	(814)723-2306
	J. P. Hoffman	(716)372-3977
	J. Yarosz	(716)373-6513
	B. E. Jandrew	(716)593-1189

New York State Department of Environmental Conservation

Henry G. Williams
Commissioner

Region 9 Division of Mineral Resources (716)372-5636
128 South Street, Olean, New York 14760-9990

Supplementary Conditions

for

Bass Island Drilling

(Rev. 7. 5/17/83)

Permit No._____

8. A flanged choke manifold assembly shall be installed no closer than 25 feet from the wellhead containing no elbows and T's either at the wellhead or before the choke, to control the flow through the kill lines. The line shall be welded from the flange spool to the choke assembly.

9. The flow line shall be constructed of T & C tubular goods with a working pressure of at least 1500 psi and with flanged connections at the wellhead.

10. The blowout preventor shall be tested to a minimum of 1,000 psig prior to drilling out of surface casing cement. This office shall be notified eight (8) hours prior to testing and a State Oil and Gas Inspector shall be present during the test. If the inspector is not on location at the agreed to time, then the test may continue with the witness' name and the results of the test being noted on the driller's log.

11. All pipes and lines shall be staked and chained down.

12. In the event oil is produced, the oil shall be stored on site in tanks. If sufficient tank capacity is not immediately available, the oil shall be temporarily stored in lined pits and shall be pumped into tanks or tank trucks as soon as they become available.

13. The local fire department shall be notified of the well's location and the potential hazards involved prior to penetrating the Onondaga and associated fault formations, unless adequate company fire fighting equipment and personnel, approved by this office, are on standby.

14. In the event the well is completed in the Medina formation with no hydrocarbon shows in or above the Onondaga or associated fault zone, the production casing shall be cemented back a minimum of 100 feet above the Onondaga and associated fault formations. However, if shows are encountered, this minimum is increased to 300 feet.

15. Every effort shall be made to accomplish penetration of the Onondaga and associated fault formations during daylight hours.

16. The operator or designated representative, shall be on site prior to and during the penetration of the Onondaga and associated fault formations.

New York State Department of Environmental Conservation

Henry G. Williams
Commissioner

Region Division of Mineral Resources (716) 372-5636
128 South Street, Olean, New York 14760-9990

Supplementary Conditions

for

Bass Island Drilling

(Rev. 7, 5/17/83)

17. The Operator shall provide the drilling company with a well prognosis indicating tops with appropriate warning comments. This prognosis shall be posted clearly in the doghouse.

18. Drilling companies shall post in the doghouse individual crew member responsibilities for blowout control.

19. Once fluid has been put into the well, pressure control devices (i.e., spherica annular BOP, lubricator, wipers, etc.) shall be used during logging operations. Additionally, well control must be maintained while running production casing through the use of a blowout preventor.

20. A minimum log suite of gamma-ray and density must be run when completing in the Onondaga and associated fault formations. If logging tools cannot be run, it is strongly recommended that a pressure bomb survey/fluid gradient be run in lieu of logs.

21. If any permit conditions are unclear, the permittee shall immediately contact Bruce McGranahan/John Hoffman/Randy Nemecek at (716)372-5636 or 372-6242.

NOTE: Any violation of these permit conditions will result in the immediate suspension of the operation.

Attachment A

SAMPLE FORMAT

NOTICE OF STAKING (Not to be used in place of Application for Permit to Drill Form 3160-3)	6. Lease Number
1. Oil Well ☐ Gas Well ☐ Other (Specify)	7. If Indian, Allottee or Tribe Name
2. Name of Operator:	8. Unit Agreement Name
3. Name of Specific Contact Person:	9. Farm or Lease Name
4. Address & Phone No. of Operator or Agent	10. Well No.
5. Surface Location of Well Attach: a) Sketch showing road entry onto pad, pad dimensions, and reserve pit. b) Topographical or other acceptable map showing location, access road, and lease boundaries.	11. Field or Wildcat Name 12. Sec., T., R., M., or Blk and Survey or Area
15. Formation Objective(s) / 16. Estimated Well Depth	13. County, Parish or Borough / 14. State
17. Additional Information (as appropriate; must include surface owner's name, address, and telephone number)	

18. Signed_____ Title_____ Date_____

Note: Upon receipt of this Notice, the Bureau of Land Management (BLM) will schedule the date of the onsite predrill inspection and notify you accordingly. The location must be staked and access road must be flagged prior to the onsite.

Operators must consider the following prior to the onsite:

a) H_2S Potential
b) Cultural Resources (Archeology)
c) Federal Right of Way or Special Use Permit

IMPORTANT: SEE REVERSE SIDE FOR INSTRUCTIONS

BILLING CODE 4310-84-C

Instructions for Preparation of Attachment A

General: This provides notice to the Bureau of Land Management (BLM) that staking has been (or will be) completed for well locations on Federal or Indian leases and serves as a request to schedule an onsite inspection. The original and one copy of this notice, together with a map and sketch, should be submitted to the appropriate BLM office.

Any item not completed may be justification for not promptly scheduling the onsite inspection.

Specific Considerations: Items included herein should be reviewed and evaluated thoroughly prior to the onsite. These items affect placement of location, road, and facilities. Failure to be prepared with complete, accurate information at the onsite may necessitate later re-evaluation of the site and an additional onsite inspection.

a. H_2S Potential: Prevailing winds, escape routes, and placement of living quarters must be considered.

b. Cultural Resources: Archeological surveys, if required, should be done prior to, during or immediately following the onsite. Changes in location due to subsequent archeological findings may require an additional onsite. Contact involved Surface Management Agency (SMA) for detailed site specific requirements.

c. Federal Right-of-Way or Special Use Permit: Access roads outside the leasehold boundary which cross Federal lands will require a right-of-way grant or special use permit and should be discussed with the BLM or other involved SMA at the time of filing the Notice of Staking.

Supplemental Checklist: The following items, if applicable, should be submitted with or prior to the Application For Permit to Drill (APD) to ensure timely approval of the application. Contact the BLM regarding specific requirements relating to each item.

a. Bonding.

b. Designation of Operator.

c. Report of Cultural Resources/ Archeology.

d. H_2S Contingency Plan.

e. Status of Plan of Development and Designation of Agent for wells in Federal units.

f. Federal Right-of-Way (BLM) or Special Use Permit (Forest Service).

Timetable: The onsite inspection will be scheduled and conducted by the BLM within 15 days after receipt of this notice. Surface protection and rehabilitation requirements will be made known to the operator by the BLM during the onsite or no later than 5 working days from the date of inspection, barring unusual circumstances. These requirements are to be incorporated into the complete APD. However, this does not exclude the possibility of additional conditions of approval being imposed.

Attachment B

Date:— _____

Bureau of Land Management

Checklist for Applicant Notification

Receipt and Acceptability of Application for Permit To Drill (APD)

Lease No.—————
Well No.—————
Lessee—————
Operator—————
Date APD Received—————

1.—APD complete as submitted.

2.—APD is deficient in the following area(s) *and* (see items 3, 4, or 5 below):

—Designation of Operator
—Designation of Agent under—————unit agreement
—Bonding
—Cultural Resources Report (depends on Federal Surface Management Agency's Requirements
—Form 9–331C
—Drilling Plan
—Other

(Refer to attachment(s) for any specifics)

3.—APD is retained; to be processed upon receipt of further information as noted above.

4.—APD is being processed; final action pending receipt of further information as noted above.

5.—APD is returned for the following reasons:—————

Note:— A returned APD herewith may be resubmitted when convenient at which time it will be reviewed again for technical and administrative completeness.

A retained but deficient APD must be brought to a technically and administratively acceptable level of completion within 45 days of the date of this notice or the application will be returned unapproved.

[FR Doc. 83-28642 Filed 10-20-83; 8:45 am]
BILLING CODE 4310-84-M

Attachment B

FILE COPY

USE PERMIT

Sacramento County
Office of the Planning and
Community Development Department
827 Seventh Street
Sacramento, California 95814

RECEIVED
JUN 21 1984
ENVIRONMENTAL IMPACT SECTION
County of Sacramento

Assessor's Parcel No: 156-050-14 Date: June 14, 1984
Control No: 84-UP-372-D

TO: PETER AND MARIAN CAMPI, P.O. Box 515, Isleton, CA 95641

ACTION: On June 14, 1984, the Zoning Administrator granted a Use Permit to allow the drilling of an exploratory oil/gas well in the AG-80(F) zone (pursuant to Section 201-02(13) of the Zoning Code).

Property Location: Located on the east side of Georgiana Slough, approximately 1100 feet south of the Southern Pacific Railroad on Tyler Island in the Delta.

Environmental Document: The Zoning Administrator determined that the Negative Declaration was adequate and appropriate and adopted the findings thereof.

FINDINGS:

1. The use is consistent with the Sacramento County General Plan and with the Delta Community Plan.

2. The grant will not be detrimental to the health, safety, peace, morals, comfort, or general welfare of persons residing in the immediate area nor will be detrimental or injurious to the general welfare of the residents of the County as a whole in that the drilling operation is proposed to take place on a 78 acre parcel.

3. The property is in agricultural use and all surrounding uses are exclusively agricultural.

4. The nearest residential use is over one-half mile to the west on Tyler Island Bridge Road.

5. Conditions have been imposed which will mitigate potential adverse effects of the drilling operation.

6. All of the conditions imposed are reasonably related to the use.

The above use will not be conducted to constitute either a public or private nuisance. Violation of any of the foregoing conditions will constitute grounds for revocation of this permit. Building permits are required in the event any construction is planned.

A conditional use permit, if not used for the purpose for which it was granted, shall lapse and shall become void three years following the date on which the permit became effective, unless by condition of the permit a greater time is allowed, or upon the expiration date of a valid building permit obtained after the grant of the conditional use permit, whichever date is last to occur.

Tom Hutchings
Zoning Administrator

CONDITIONS:

1. The drilling operation shall be located generally as shown on Exhibit "A."

2. If toxic drilling fluid additives are used, the storage sump is to be artificially lined to preclude seepage of wastes.

3. The composition of toxic drilling fluid additives should be reviewed and approved by the Hazardous Materials Management Section of the State Health Services Department.

4. All drilling muds must be removed and disposed of to the satisfaction of the California Regional Water Quality Control Board, Central Valley Region.

5. If an impervious sump is installed, remove it at the completion of drilling activities.

6. Restore the area to its previous state upon abandoning the well.

7. Retain a qualified archeologist to observe during the excavation of the cuttings sump. At the conclusion of the excavation, the archeologist is to submit a letter report of the findings to the Environmental Impact Section.

8. At the recommendation of the archeologist, stop the project if significant cultural resources are unearthed until appropriate action to avoid further damage can be taken.

TH:kc

SAMPLE GAS WELL

WATER Quality
Disposal of Drilling Additives
Cultural RESOURCES
MINERAL RIGHTS

ENVIRONMENTAL IMPACT SECTION
INITIAL STUDY

NAME: CASTLE MINERALS USE PERMIT

ASSESSOR'S PARCEL NO.: 156-050-14

CONTROL NO.: 84-UP-372

LOCATION: The project is located about 4500 feet north of the intersection of Tyler Island Road and Tyler Island Bridge Road, on Tyler Island, in the Delta; being about 2500 feet west and 300 feet south of the northeast corner of Section 29, Township 4 North, Range 4 East, M.D.B.&M.

OWNER:

Peter L. and Marian M. Campi
P.O. Box 515
Isleton, CA 95641

APPLICANT:

Castle Minerals
William G. Castle
919 Lawrence Drive
Newbury Park, CA 91320

I. PROJECT DESCRIPTION:

The proposed project consists of a request for a use permit to allow a gas well on a 78.8± acres parcel in the AG-80(F) - permanent agriculture zone.

II. ENVIRONMENTAL SETTING:

The proposed well location is within an agricultural field about two miles northeast of the City of Isleton, in the Delta area of Sacramento County. The surrounding area is entirely agricultural, with the closest farm buildings being about one-half mile to the north and west. There are no significant natural features at or near the site. Tyler Island is within the 100-year floodplain of the Delta and the surface elevation of the proposed well site is about ten feet below sea level.

III. ENVIRONMENTAL EFFECTS:

See Initial Study Checklist attached to the Negative Declaration and the following discussion.

Water Quality: The site is within the 100-year floodplain of the Delta. The Regional Water Quality Control Board would have jurisdiction to halt the drilling operation or otherwise alter the proposed activities should the potential for surface water contamination arise from flood waters or other causes. In addition, impervious cuttings sumps are often required for this type of operation, and such a sump would be beneficial in reducing potential effects to water quality. However, if an impervious sump is installed, it should be removed upon completion of drilling activities to restore the natural soil conditions and groundwater percolation to the area.

Disposal of Drilling Additives: Drilling operations require drilling mud compounds to increase the abrasive action of the drill bit and to provide a seal around the shaft pipe to contain the gas within the well system when it is found. Often toxic fluids will be added to the drilling mud to dissolve certain particularly resistant underlying rock strata and obviously these toxic materials would have to be properly disposed of. In addition, however, non-toxic muds can adversely effect ground water or surface waters, due to salinity and turbidity factors, if adequate disposal practices are not followed. Some previously approved Class II-1 mud disposal sites have already experienced such ground water salinity problems. Therefore, all of the drilling muds generated from the subject well site should be removed and disposed of to the satisfaction of the California Regional Water Quality Control Board, Central Valley Region.

If toxic drilling fluid additives are necessary at the subject well, a review of the composition of the additives should also be made available to the State Department of Health Services, Hazardous Materials Management Section, as many of these additives are on the State's established list of restricted materials.

There are three Class II-1 disposal sites within reasonable driving distance of the proposed well location. Two of these sites, Flannery in Solano County and the Sacramento County Sanitary Land Fill, are currently acceptable to the Regional Water Quality Control Board as disposal sites for drilling muds. The third site, Holt in San Joaquin County, is experiencing water quality problems and should not be used at this time (McKinnely).

Cultural Resources: Archeological sites have been recorded throughout the southwestern portion of the County. As a means of minimizing potential impacts to cultural resources, the applicant should be prepared to stop the excavations of the cuttings sump if any significant resources are unearthed, until appropriate actions are taken to avoid further damage to the archeological resources.

Mineral Rights: At the proposed well location the subject property (Assessor's Parcel No. 156-050-14) is only 500± feet wide and therefore it may be possible that more than one property owners mineral rights may be involved if the proposed well is productive. As explained by Jim Campion of the California Division of Oil and Gas, there is a common statute in California, known as the "Rule of Capture", which gives property owners royalty rights on gas or oil production if their property is within 100 feet of the producing well (on the surface) or within 75 feet of the well bottom. The location of any slant-drilled well bottom must be identified, by means of a directional survey, and recorded with the Division of Oil and Gas prior to the well being brought into production. In addition, all lease agreements, including those pertaining to the "Rule of Capture", must also be settled prior to the beginning of production. It is the responsibility of the State to enforce lease agreements and/or halt production form a non-complying producer.

IV. ENVIRONMENTAL MITIGATION MEASURES:

A) If toxic drilling fluid additives are used, the storage sump is to be artificially lined to preclude seepage of wastes.

B) The composition of toxic drilling fluid additives should be reviewed and approved by the Hazardous Materials Management Section of the State Health Services Department.

C) All drilling muds must be removed and disposed of to the satisfaction of the California Regional Water Quality Control Board, Central Valley Region.

D) If an impervious sump is installed, remove it at the completion of drilling activities.

E) Restore the area to its previous state upon abandoning the well.

F) Retain a qualified archeologist to observe during the excavation of the cuttings sump. At the conclusion of the excavation, the archeologist is to submit a letter report of the findings to the Environmental Impact Section.

Environmental

G) At the recommendation of the archeologist, stop the project if significant cultural resources are unearthed until appropriate action to avoid further damage can be taken.

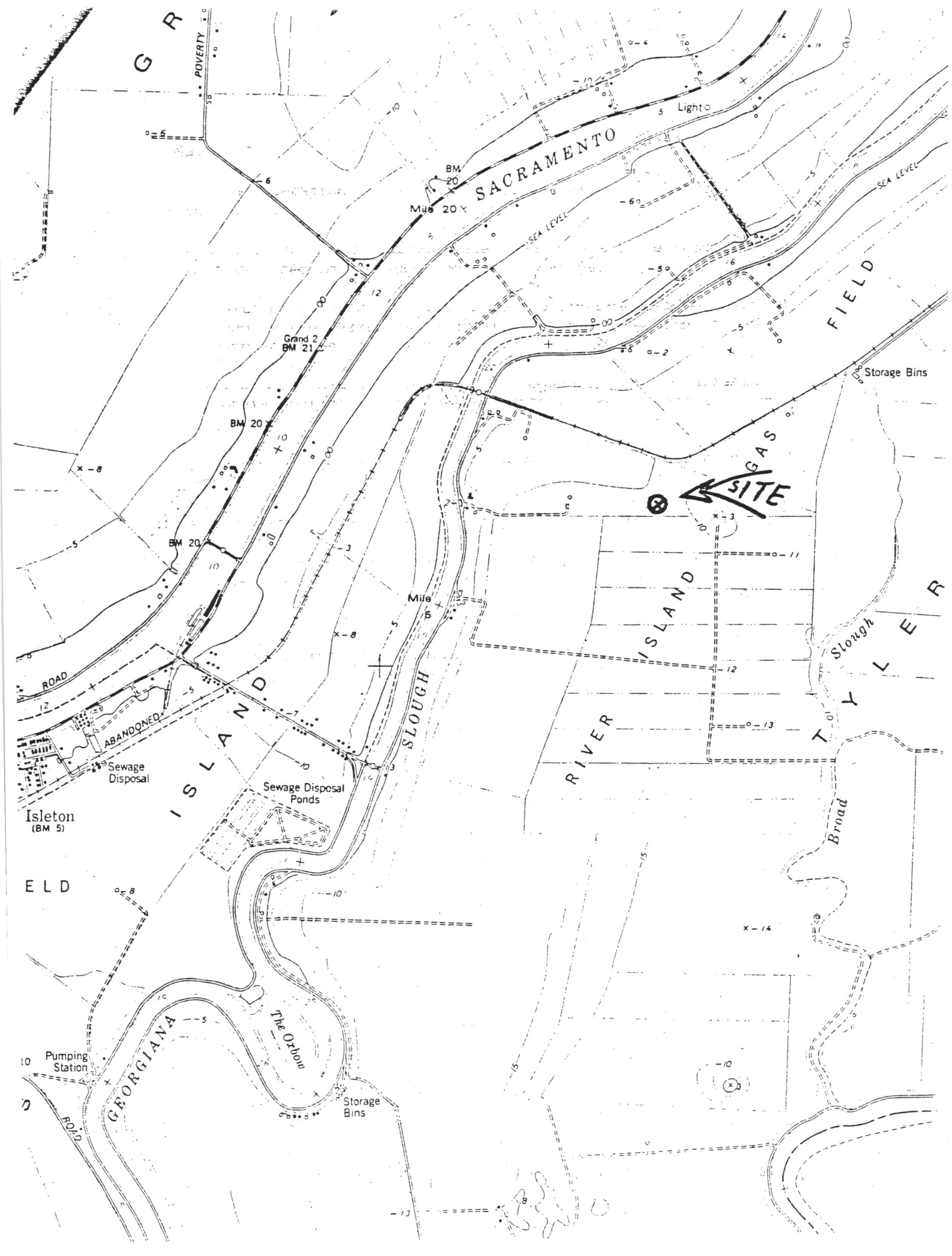
V. COMPATIBILITY WITH EXISTING PLANS AND ZONING:

A) General Plan: The County General Plan Land Use Map indicates the property for agricultural cropland.

B) Community Plan: The delta area Community Plan Land Use Map indicates the property for permanent agriculture-extensive (flood).

C) Zoning: The subject property is presently zoned AG-80(F).

IV. This Initial Study has been prepared by Alcides Freitas, Lowell Young, Jim Rains and Linda Quinday of the Sacramento County Environmental Impact Section staff.


POVERTY
SACRAMENTO
Light 5
BM 20
Mile 20
SEA LEVEL
Grand 2
BM 21
BM 20
BM 20
Storage Bins
GAS FIELD
SITE
Mile 5
ROAD
ABANDONED
Sewage Disposal
Sewage Disposal Ponds
ISLAND
SLOUGH
RIVER ISLAND
TYLER
Slough
Broad
Isleton
(BM 5)
Pumping Station
GEORGIANA
The Oxbow
Storage Bins
ROAD

AL STUDY CHECKLIST

ENVIRONMENTAL IMPACT SECTION

CONTROL NO. 84-UP-372

Could/Would the project:	YES	MAYBE	NO	
1) significantly affect Regional air quality?			X	
2) significantly affect local air quality?			X	A minor increase in vehicle emissions would occur during drilling.
3) contribute to the removal of significant amount of prime agricultural land from agricultural production?			X	If successful, a minor amount of prime agricultural land would be removed from production for well head equipment.
4) create the potential for property damage following completion of the project due to existing or altered soil and/or slope conditions?			X	A remote possibility of a blow out and/or soil contamination would exist; preventative inspection and regulation by State agencies is mandatory.
5) be adversely affected by other geologic or seismic hazards?			X	Ground subsidence occurs in this area; effects to drilling operations would be mitigateable by appropriate anchorage of the well, as would be specified by the State Division of Oil and Gas.
6) cause erosion or siltation resulting in severe water quality impacts or damage to adjacent properties?			X	
7) have substantial effect on the supply or consumption of a mineral resource?			X	If productive, an incremental decrease in natural gas reserves would result.
8) significantly affect ground or surface water supply or quality?			X	No, if all drilling mud is removed and disposed of to the satisfaction of the Regional Water Quality Control Board.
9) substantial affect, or be affected by flooding?			X	The entire island is within the 100-year floodplain of the Delta; only minimal affects to the floodplain would result; impacts to a drilling operation from flooding should not be significant.
10) adversely affect populations of unique, rare or endangered plants or animals, or their habitat?			X	None known in the area.
11) significantly affect resident or migratory wildlife or their habitat?			X	
12) affect or result in the removal of critical habitat, such as riparian and wetland plant associations?			X	
13) affect or result in the removal of prominent, heritage, or landmark trees, or otherwise aesthetically important plant forms?			X	
14) affect sites of archaeological or historical importance?			X	Archeological sites have been found throughout this area; impacts could be mitigated by inspection and recommendation of a qualified archeologist.

EIS/3 - Revised 7-80

[illegible] may be obtained by contacting the Section at 827 Seventh Street, Room 101, Sacramento, California, 95814, or phone (916) 440-7014

	YES	MAYBE	NO	
15) be in conflict with adopted General, Community, or specific plans of Sacramento County?			X	In addition to the State Department of Oil and Ga
16) conflict with adopted plans of agencies or jurisdictions other than Sacramento County?			X	the Regional Water Quality Control Board and the State Hazardous Materials Management Section may h jurisdiction.
17) require major modification of, or adversely affect, public facilities?			X	
18) have a substantial affect upon transportation facilities?			X	Currently there is no direct access to the well si
19) have a substantial affect on energy demands?			X	
20) substantially affect the quantity of open space in an area, or severely and adversely change the visual character of the project site?			X	
21) generate average or peak noise levels that would seriously affect the health or general well-being of any nearby people?			X	No residences exist within 2,000 feet of the site.
22) with existing average or peak noise levels at the project site seriously affect the health or general well-being of any nearby people?			X	
23) cause significant shifts in employment or income characteristics of the community?			X	
24) have a substantial and demonstrable negative aesthetic affect?			X	
25) breach published national, state, or local standards relating to solid waste or litter control?			X	
26) induce substantial growth or concentration of population?			X	
27) displace a large number of people, or disrupt or divide an established community?			X	
28) involve a risk of an explosion or the release of hazardous substances in the event of an accident or upset conditions?			X	There are no residences within 2,000 feet of the s
29) involve possible interference with an emergency response plan or an emergency evacuation plan?			X	
30) result in creation of any health hazard or potential health hazard, or expose people to potential health hazards?			X	

California

THE RESOURCES AGENCY

Memorandum

Bruce Walters
State Clearinghouse

Date: JUN 11 1984

Alcides Freitas
Sacramento County
827 7th Street, Room 101
Sacramento, CA 95814

RECEIVED
JUN 18 1984
ENVIRONMENTAL IMPACT SECTION
County of Sacramento

CALIFORNIA WASTE MANAGEMENT BOARD

Re: SCH #84050711 Castle Minerals Gas Well

We have received and reviewed the proposed Negative Declaration for the Castle Minerals Gas Well. No discussion of the means to dispose of the drilling muds from the site is included. If an onsite sump will be used to contain more than 2 acre feet of material for more than one year, it is likely to require a permit from either our Board or the Department of Health Services. Our Board will be involved with any needed permitting for non-hazardous waste. If muds are determined to be hazardous, the applicant should contact the Department of Health Services, Hazardous Waste Section, regarding permitting.

The County should assure that any offsite drilling mud disposal site utilized is permitted if a permit is required. The County should also assure that disposal sites utilized are appropriate for the disposal of liquid or hazardous waste generated by the project.

If there are questions regarding the need to permit a drilling mud disposal site or appropriate offsite disposal facilities, the applicant or the county planning staff should contact Art Siepal of the Environmental Health Section of the Sacramento County Health Department at (916) 366-2101.

Thank you for the opportunity to comment on this project. If there are any questions regarding our comments, please contact Eric Maher at (916) 322-0464.

Herb Iwahiro
Deputy Executive Officer

Attachment C

U.S. Department of the Interior
Bureau of Land Management

CATEGORICAL EXCLUSION REVIEW RECORD

CER No. _____

Authority (516 DM 6, Appendix 5.4) _____

Reference Document _____

Project _____

Project Location _____ Meridian _____ Sec. _____ T. _____ R. _____ Co. _____ State _____

File No. _____ Lease No. _____ Field/Unit _____

Applicant _____ Date Submitted/Initiated _____

CER Preparer _____ Field Inspection Date _____

The affected Resource Area received a copy of this action proposal for review before or during the field inspection. Stipulations ☐ were ☐ were not received from the Area and appropriate stipulations were incorporated.

Exception Criteria*	Exception Criteria Exceeded		Confirmation		Stipulations, Comments, Data Sources, etc. (Refer to next page)	
	Yes	No	Signature/ Initials	Date	Yes	No
1. Public Health & Safety						
2. Unique Characteristics						
3. Environmentally Controversial						
4. Uncertain and Unknown Risks						
5. Establishes Precedent						
6. Cumulatively Significant						
7. Cultural Res. & Nat. Reg. Hist. Places			1		Cultural Clearance No. _____	
8. Endangered/Threat. Species			2			
9. Violate Fed., State, Local, Tribal Law						

Check one:

☐ This proposal meets all the requirements of a categorical exclusion, and does not negatively affect other environmental resources.

☐ Exception criteria were exceeded and appropriate mitigation cannot be provided without further environmental analysis.

Environmental Coordinator/Environmental Scientist _____ Signature _____ Date

Manager _____ Signature _____ Date

*Refer to BLM Categorical Exclusion Review (CER) Procedures; Criteria for Exception — Description for full explanation (516 DM 2.3A(3)).

[1]Archaeologist signature required

[2]Wildlife Biologist signature required

United States Department of the Interior
Bureau of Land Management

Categorical Exclusion/Land Report/Decision Record

1. CE Number: WY 012 - CE 2. Case Serial or Project File Number: WS-A15-WC
3. Resource Area: WASHAKIE 4. Authority Cited—516 DM. 6, Appendix 5, 5.4: # _____
5. Project Name and Date of Application: BASS MEYERS GULCH Fed.
6. Project Location: T 43 N R 90 W Sec(s). 28 SW¼SW¼
7. Project Description: WILDCAT APD NEW access rd. on lease
8. **Record of Exception:** The project or proposal is determined to have the effect indicated on the following critical elements. Check as appropriate and reference any comments by letter and number (i.e., A.1.). All "A" items must be checked.

Negligible Effect	Consequential Effect	Element	Remarks/Explanation
		A. Environmental Factors	
☑	☐	1. ACEC	
☑	☐	2. Unique Resources (Identify)	
☑	☐	3. T&E Species (Identify)	B WEYNAND
☐	☐	4. Cultural or Historical Resources	J JAMESON
☑	☐	5. Wilderness/Wilderness Study Area	M GOLDBACH
☑	☐	6. Wild or Scenic River	
☑	☐	7. Flood Plains/Wetlands/Prime or Unique Farmlands	
☑	☐	8. Prime or Sole Source of Drinking Water	
☑	☐	9. Public Health or Safety	M CONNOLLY
☐	☐	10. Other	
		B. Other Factors	
☑	☐	1. Violates Local/State/Federal Law	
☑	☐	2. Involves Uncertain/Unique Risks	
☑	☐	3. Involves Unresolved Resource Conflicts	
☑	☐	4. Set a Precedent	
☑	☐	5. Is Highly Controversial	
☐	☐	**C. Cumulative Impacts**	

(Continue on seperate sheet if necessary)

List other specialists (name) involved in the above review: _____

9. Finding: Based on the preceding review done in accordance with established procedure, I conclude that the action is a bona fide categorical exclusion. I recommend that no EA/EIS be prepared since the proposal will neither individually nor cumulatively significantly effect the human envirnoment.

Prepared by: James T Boatman (Signature and Specialist Title) Date: 3/5/85

10. Decision: The proposal is (approved) ~~(rejected)~~ as ~~(submitted)~~ (modified) ~~(recommended in the Land Report)~~. This decision (is) ~~(is not)~~ consistent with the Shell - Nowood ~~(RMP)~~ (MFP).

The stipulation(s) ~~(attached)~~ ~~(in the case file)~~ ~~(is)~~ (are) required to ensure that no significant impacts will result from the action.

Roger D. Hamman (Area Manager Signature) Date: 3/6-85

11. For APDs

Concur: _____ (Minerals Manager Signature) Date: _____

Land[1]/Mineral Report Decision Factors

1. Description of the Proposed Action/Field Site Examination: Wildcat APD See 13 pt plan

2. Legal Land Status Including prior Existing Rights and Land Ownership of Adjacent Non-Federal Lands:

3. Pending Applications: None

4. Economic and Social Effects: None

5. Access: Existing access + short new access rd on lease

6. Land Use Capability and Past, Present, and Future Land Uses: O&G / Wildlife

7. Government and Public Support:

8. Legal Requirements:

9. Recommendation/Rationale: Approve w/ stips

a. Authority:
b. Term:
c. Area:
d. Bond:
e. Prework Conference: 2/28/84 Onsite
f. Stipulations: See attached

(continued on attachment ____)

[1]An abbreviated Land Report, as provided for on this form, is not automatically appropriate, just because a categorical exclusion is appropriate.

Points 1, 3, 4, 5, 6, 8, 12 and 13 have no additions or corrections.

Planned Access Roads

All surface vegetation and the top 4 inches of soil will be removed and windrowed or stockpiled at one side of the road construction area. Temporary roads, to be used during drilling operations, will be constructed with an average width of 16 feet. Permanent roads will be constructed with an average subgrade width of 16 feet, 20 feet if the plans call for gravel. Cut and fill slopes, curve widening and turnouts will be constructed in accordance with the BLM/USGS Oil and Gas brochure. Temporary roads will be constructed with ditches approximately one foot deep with vertical backslopes. All culverts will be long enough to maintain a constant road width and 2:1 or flatter fill slopes. Any culvert which has its outlet above natural ground shall have riprap or an energy dissipator installed to prevent erosion. The operator shall maintain all roads and drainage structures on access routes to Gold Book standards.

If the well is abandoned, all newly constructed roads will be recontoured to conform with the surrounding terrain, provided that slopes will be no steeper than 3:1. All disturbed areas will be ripped or scarified to a depth of 18-24 inches. Topsoil will be redistributed evenly over the disturbed areas and then reseeded.

If the well is produced, the access road will be upgraded and maintained to the permanent road standards found in the BLM/GS booklet mentioned above. The topsoil will be redistributed evenly over the construction slopes and reseeded.

During periods of inclement weather and/or when road damage may occur, road use may be suspended by the authorized officer. If drainage or erosion problems occur, the operator will be required to repair the damage to the satisfaction of the authorized officer. If for any reason suitable repairs are not performed, the authorized officer may limit or prohibit use of the road until conditions are improved.

If snow removal should become necessary, the authorized officer must be notified prior to any such activity. All equipment blades must be equipped with "shoes" to keep the blade above the road surface.

Methods for Handling Waste Material

Drilling cuttings and muds should remain in the reserve pit until dry. If methods to facilitate drying are required, contact the BLM about approved methods. The reserve pit will not be "squeezed" or "crowded." When the pit is backfilled, cuttings and drilling muds must be covered with at least three feet of earth.

Flagging will be installed over the reserve pit to protect waterfowl.

The reserve pit will be fenced on three sides while the well is being drilled. The fence will be completed as soon as drilling is completed and before the rig leaves the site.

The reserve pit dike will be constructed in 8-inch lifts. Each lift will be watered evenly by a water truck equipped with spreader bars. It will be compacted using a sheep's-footroller.

Well Site Layout

The top 6 inches of soil and all vegetation on the site will be removed and stockpiled. The stockpiled soil (approximately 1300 cubic yards) will not be used for any purpose except the rehabilitation of the disturbed area.

During construction and restoration, surface use and disturbance will not extend more than 40 feet beyond the cut and fill slopes of the drill pad.

During drilling and production, all surface use will be confined to the drill pad and access road unless written approval is secured.

For production or abandonment, final cut and fill slopes must be no steeper the 3:1, and will be left rough or serrated. Slopes may be steeper than 3:1 during drilling and development stage. Permanent steeper slopes may be acceptable but must be approved by the authorized officer.

Plans for Restoration of Surface

Pipelines, flowlines, powerlines, and any other facilities on public land must have formal rights-of-way or a permit from the BLM except those which the operator owns and operates within the bounds of the lease.

All disturbed areas will be reseeded with the following mixture of all Pure Live Seed:

Recommended Grasses:

Bluebunch Wheatgrass	3 LBS/AC/PLS
Indian Ricegrass	1 LBS/AC/PLS
Western Wheatgrass	3 LBS/AC/PLS

Alternate Grasses:

Thickspike Wheatgrass	3 LBS/AC/PLS
Prairie Junegrass	1 LB/AC/PLS

The alternate species listed will be used as substitutes only in the event that the recommended seed species is unavailable. If recommended shrub is unavailable and there is no alternate shrub listed, use an alternate grass in its place.

Seed can be applied by broadcasting or drilling. Drilling is the most successful and desirable reseeding method. Seed should be drilled between 1/4 and 1/2 inch deep, depending upon the seed and soil condition. It is helpful to have depth bands on the drill and to have a drill with an agitator or special grass seeding attachment for exceptionally hairy or small seeds. Seedbed is to be broadcast, double the drilling rate. Reseeded areas will be raked, harrowed, or dragged to cover the seed.

Fall seeding is recommended. Seeding should be done after September 1 and before the ground has frozen. All seed will be drilled on the contour to a depth of one-half inch.

When the site is abandoned, all refuse, hardware, and other waste material will be removed from the site. The site will be recontoured to conform with the surrounding terrain, ripped or scarified to a depth of 18-24 inches, covered with stockpiled soil, and reseeded. To stop erosion, waterbars, mulching, or other protective measures may be required.

If the well is brought into production, those portions of the pad which are required for continued production will be graded to provide drainage and minimize erosion. Those portions of the pad which are not needed for production operations or facilities will be recontoured to conform with the surrounding terrain, ripped or scarified to a depth of 18 - 24 inches, covered with topsoil from the stockpile, and reseeded. To stop erosion, waterbars, mulching, or other protective measures may be required.

Other Information

The BLM will be notified at least five days before construction begins.

Any cultural resource (historic or prehistoric site or object) discovered by the operator shall be immediately reported to the District Manager. Operations shall be suspended in the area of the discovery until written authorization to proceed is issued by the District Manager.

The BLM will evaluate the discoveries of cultural resources within five (5) working days of notification and a determination made as to what action will be taken with respect to these discoveries. The responsibility for, and cost of, investigation and mitigation of such values discovered during operations will be that of the lease holder.

If paleontological resources, either large and conspicuous, and/or of significant scientific value are discovered during construction, the find will be reported to the Authorized Officer immediately. Construction will be suspended within 250 feet of said find. An evaluation of the paleontologic discovery will be made by a BLM approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological values. Operations within 250 feet of such a discovery will not be resumed

until written authorization to proceed is issued by the Authorized Officer. The applicant will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operation.

All above ground structures in place for more than six months will be painted similar to Standard Environmental Color Desert Tan except where special colors are required by regulatory agencies, or the operator for operational efficiency, safety or other agreed upon purposes.